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| 10/066,066      | 01/31/2002  | Robert W. Aukerman   | P 1028.11004        | 2497             |

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EXAMINER

LIANG, LEONARD S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2853

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/066,066 | <b>Applicant(s)</b><br>AUKERMAN, ROBERT W. |  |
|                              | <b>Examiner</b><br>Leonard S Liang   | <b>Art Unit</b><br>2853                    |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2, 4-6, 8 and 15-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 2, 4-5, 15-22 is/are rejected.
- 7) ☒ Claim(s) 6 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 4-5 and 21-22 are objected to because of the following informalities: Claims 4 and 5 are identical and claims 21 and 22 are nearly identical (except for a minor grammatical difference which does not affect the scope of the claims). The examiner recommends that the applicant cancel necessary claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

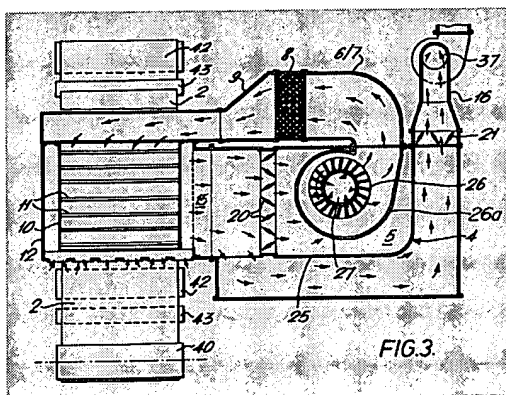
Claims 15-16 and 18 rejected under 35 U.S.C. 102(b) as being anticipated by Mallinson (US Pat 4233901).

Mallinson discloses:

- {claim 15} An ink drying system for high speed printing on a traveling sheet of material, the system being coupled to a source of pressurized gas (figure 3; column 1, line 55-column 2, line 49); a first plenum disposed so as to extend over the sheet and define a first drying portion of the first plenum for directing the gas through the first plenum onto the sheet (figure 3, reference 10); an electrically controlled first fluid flow valve for varying the flow rate of the gas through the first plenum (column 3, lines 30-48); a controller for electrically receiving

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information about the amount of ink to be dried by the first drying portion and electrically controlling the first fluid flow valve in response to the information (abstract; column 1, line 55-column 2, line 49; column 3, lines 30-48)



- {claim 16} the controller is adapted to control the first fluid valve in response to changes in the amount of ink to be dried in different lines of printing (column 1, lines 8-14; column 1, line 55-column 2, line 20)
- {claim 18} A method for high speed printing on a traveling sheet of material (figure 3; column 1, line 55-column 2, line 49); providing a first plenum disposed so as to extend over the sheet and define a first drying portion of the first plenum for directing gas from a pressurized source of gas through the first plenum onto the sheet (figure 3, reference 10); electrically receiving information about the amount of ink to be dried by the first drying portion; and electrically controlling the flow rate of the gas through the first plenum in response to the information (column 1, lines 9-11; column 1, line 55-column 2, line 49; column 3, lines 30-48)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallinson (US Pat 4233901) in view of Briggs (US Pat 5190201).

Mallinson discloses:

- {claims 2, 17, 19-20, and 23} an ink drying system (as applied to claim 15 above)
- {claims 2 and 20} the drying portions provide substantially complete laterally extending coverage of the sheet (figure 3, reference 10)

Mallinson differs from the claimed invention in that it does not disclose:

- {claim 2} the first drying portion provides a substantially different range of laterally extending coverage of the sheet than the second drying portion
- {claim 17} a second plenum disposed so as to extend over the sheet and define a second drying portion of the second plenum for directing the gas through the second plenum onto the sheet
- {claim 19} providing at least a second plenum disposed so as to extend over the sheet and define a second drying portion of the second plenum for directing the gas through the second plenum onto the sheet
- {claim 20} the first drying portion provides a substantially different range of laterally extending coverage of the sheet than the second drying portion

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Mallinson discloses:

- {claim 2} the first drying portion provides a substantially different range of laterally extending coverage of the sheet than the second drying portion (figure 2, reference 130)
- {claim 17} a second plenum disposed so as to extend over the sheet and define a second drying portion of the second plenum for directing the gas through the second plenum onto the sheet (figure 2, reference 130; figure 4, reference 148)
- {claim 19} providing at least a second plenum disposed so as to extend over the sheet and define a second drying portion of the second plenum for directing the gas through the second plenum onto the sheet (figure 2, reference 130; figure 4, reference 148)
- {claim 20} the first drying portion provides a substantially different range of laterally extending coverage of the sheet than the second drying portion (figure 2, reference 130)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Briggs into the invention of Mallinson. The motivation for the skilled artisan in doing so is to gain the benefit of selectively drying a broader area of the recording media and creating a plurality of high pressure regions. The combination naturally suggests an electrically controlled second fluid flow valve for varying the flow rate of the gas through the second plenum, wherein the controller is adapted to receive information about the amount of ink to be dried by the second drying portion and to electrically control the second fluid flow valve in response to the information and the first drying portion provides a

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substantially different range of laterally extending coverage of the sheet than the second drying portion.

Claims 4-5 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallinson (US Pat 4233901) in view of Briggs (US Pat 5190201), as applied to claims 2, 17, and 19-20, and further in view of Kolb (US Pat 5791247).

Mallinson discloses:

- {claims 4-5 and 21-22} a quantity of the ink is defined by a spatially varying distribution (column 1, lines 9-11)

Mallinson, as modified, differs from the claimed invention in that it does not disclose:

- {claims 4-5} the controller is adapted, based on the distribution, to select one of the first and second plenums to receive more of the pressurized gas than the other of the first and second plenums
- {claims 21-22} the controlling, based on the distribution, comprises selecting one of the first and second plenums to receive more of the pressurized gas than the other of the first and second plenums

Kolb discloses:

- {claims 4-5 and 21-22} individually adjusting air flow through nozzles (column 2, lines 31-43); adjustable valves (column 6, lines 21-28)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Kolb into the invention of modified Mallinson. The motivation for the skilled artisan in doing so is to gain the benefit of being able

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to adjust the airflow through the different plenums for selective drying of the different regions of the recording media. The combination naturally suggests the controller is adapted, based on the distribution, to select one of the first and second plenums to receive more of the pressurized gas than the other of the first and second plenums.

***Allowable Subject Matter***

Claim 8 is allowed.

The primary reason for the allowance of claim 8 is the inclusion of the method step of “selecting the other of the two plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein the second amount of the pressurized gas is predetermined based on the first amount, and wherein the difference between the first time and the second time is substantially equal to the distance divided by the speed of travel of the sheet.” It is this step found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Claims 6 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 discloses, “said controller is adapted to select one of said first and second plenums to receive a first predetermined amount of the pressurized gas at a first time, and to select the other of said first and second plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein the second amount of the pressurized gas is



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predetermined based on the first amount, and wherein the difference between the first time and the second time is substantially equal to the distance divided by the speed of travel of the sheet,” which was not found, taught, or disclosed in the prior arts.

Claim 23 discloses, “wherein said controlling comprises selecting one of said first and second plenums to receive a first predetermined amount of the pressurized amount of the pressurized gas at a first time, and selecting the other of said first and second plenums to receive a second predetermined amount of the pressurized gas at a second time, wherein said second amount of the pressurized gas is predetermined based on said first amount, and wherein the difference between the first time and the second time is substantially equal to the distance divided by the speed of travel of the sheet,” which was not found, taught, or disclosed in the prior arts.

### ***Response to Arguments***

Applicant's arguments with respect to claims 2, 4-6, 8, and 15-23 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LAMSON NGUYEN  
PRIMARY EXAMINER

04/30/07